SPECIES COMPOSITION OF INDUSTRIAL TRAWL FISH LANDINGS IN NEW ENGLAND, 1958

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UNITED STATES DEPARTMENT OF THE INTERIOR
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by

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LIST OF TABLES

		Page
1.	Landings and number of trips by month and fishing area, of industrial trawl-fish vessels at Point Judith, R. I., 1958	3
2.	Landings and number of trips, by month, of industrial trawl-fish vessels at New Bedford, Mass., 1958	3
3.	Landings and number of trips, by month and fishing area, of industrial trawl-fish vessels at Gloucester, Mass., 1958	4
4.	Species composition, in percent by weight, of Point Judith industrial trawl-fish landings from the offshore area, by months, 1958	5
5.	Species composition, in pounds, of Point Judith industrial trawl-fish landings from the offshore area, by months, 1958	6
6.	Species composition, in percent by weight, of Point Judith industrial trawl-fish landings from the inshore area, by months, 1958	7
7.	Species composition, in pounds, of Point Judith industrial trawl-fish landings from the inshore area, by months, 1958	8
8.	Species composition, in percent by weight, of industrial trawl-fish, landings from the No Mans area, by months, 1958	9
9.	Species composition, in pounds, of New Bedford industrial trawl-fish landings from the No Mans area, by months, 1958	10
0.	Species composition, in pounds, of Point Judith industrial trawl-fish landings from the No Mans area, by months, 1958	11
11.	Species composition, in percent by weight, of Gloucester industrial trawl-fish landings from the Ipswich area, by months, 1958	12
12.	Species composition, in pounds, of Gloucester industrial trawl-fish landings from the Ipswich area, by months, 1958	13
13.	Species composition, in percent by weight, of Gloucester industrial trawl-fish landings from the Stellwagen Bank area, by months, 1958	14
14.	Species composition, in pounds, of Gloucester industrial trawl-fish landings from the Stellwagen Bank area, by months, 1958	15
15.	Species composition, in percent by weight, of Gloucester industrial trawl-fish landings from the Nauset area, by months, 1958	16
16.	Species composition, in pounds, of Gloucester industrial trawl-fish landings from the Nauset area, by months, 1958	17
17.	Total pounds and percentage of each species landed in the industrial trawl catch, by port and fishing area, 1958	18
18.	Catch per trip of industrial trawl on each of the principal fishing areas, by months, 1958	20



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ABSTRACT

Data are presented on the species composition of the industrial trawl-fish catch landed at New England ports in 1958. The pounds landed and percent by weight of the species taken for each of the principal fishing areas are given by month and port, with appropriate summaries.

INTRODUCTION

The species composition of the landings of the industrial trawl fishery of New England for 1958 is presented in this report. These data were developed to help answer the many questions asked by the fishing industry and the interested public about the composition of these catches.

Industrial fish are, for the most part, utilized in the production of fish meal and homogenized condensed fish--products that are used as additives to poultry and livestock rations. They have been valued as an inexpensive source of protein, as well as for their 'unidentified growth factor." The controversies that have developed over the industrial fishery usually have involved charges that excessive quantities of valuable food species and very small fishes are taken. The degree to which this may or may not be true is matter of concern to the U.S. Bureau of Commercial Fisheries as well as to the fishing industry. The information in this report is presented in such a manner as to permit an

evaluation of the potential effects of this fishery on any or all of the fishes of commercial importance in New England waters.

The data are presented in the same manner as in the 1957 report. The remarks in that report with regard to manner of sampling and fleet activities apply as well to this report.

Landings of industrial fish dropped considerably in 1958 (fig. 1), totaling

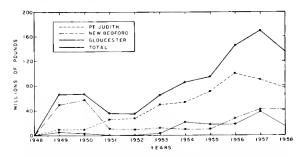


Figure 1.--Landings of industrial fish ot Point Judith, New Bedfard, and Glaucester, and the total landings, 1949 through 1958.

¹ Edwards, Robert L. 1958. Species composition of the industrial trawl landings in New England, 1957. United States Department of the Interior, U.S. Fish and Wildlife Service, Special Scientific Report--Fisheries No. 266.

only 137 million pounds, whereas in 1957, 168 million pounds were landed. Of the 1958 total, 78 million pounds were landed at Point Judith, R. I., 43 million pounds at New Bedford, Mass., and 16 million pounds at Gloucester, Mass. The greatest decrease in landings was at Gloucester, where 37 million pounds were landed in 1957.

The decrease in total landings at Point Judith appears to be the result of a slight decrease in availability of certain species, among them the silver hake, and an influx of large numbers of swordfish which diverted the fleet's attention from industrial fish during the summer. The relative decrease in abundance of silver hake in the landings was general throughout New England in 1958. The percentage contribution of silver hake to the industrial catch dropped from 23.0 percent in 1957 to 15.9 percent in 1958. This change in relative abundance occurred in all but one of the general areas listed in table 17 and is by far the most significant change observed in these 2 years.

SAMPLING PROCEDURE

Since the previous report, further research has been done on the validity of the sampling procedure. This research indicated that the present standard sample size of 1 bushel was of sufficient size to estimate the percentage composition of major species within the catch (i. e., more than 30 percent by number) to within 4 or 5

percent, and that any further significant increase in precision would involve a sample so large as to be impractical.

The areas used in reporting the data are indicated in figure 2. The data presented for these areas do not represent the ultimate detail of our interview information; they are syntheses of data from many individual fishing grounds that share some degree of ecological similarity.

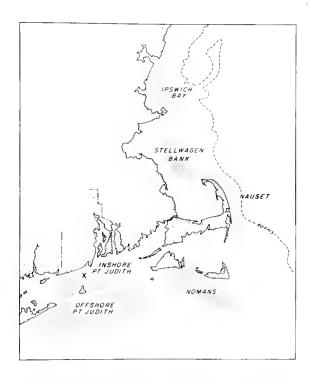


Figure 2.--Industrial fishery areas referred to in this report.

TABLES

TABLE 1.--LANDINGS AND NUMBER OF TRIPS, BY MONTH AND FISHING AREA, OF INDUSTRIAL TRAWL-FISH VESSELS AT POINT JUDITH, R. I., 1958

[In thousands of pounds]

Month	Offsh	nore	Insl	nore	No	Mans	Tot	tal
10011 011	Pounds	Trips	Pounds	Trips	Pounds	Trips	Pounds	Trips
January	598	49	572	96			1,170	145
February	782	90	311	108			1,093	198
March	925	77	660	156	80	8	1,665	241
April	4,609	178	426	96	2,253	48	7,288	322
May	4,524	76	747	184	10,331	173	15,602	433
June	2,841	99	1,938	282	6,310	105	11,089	486
July	1,280	29	1,722	194	2,139	61	5,141	284
August	2,189	66	2,233	188	2,819	89	7,241	343
September	963	30	3,873	279	4,171	129	9,007	438
October	4,644	140	3,365	252	74	3	8,083	395
November	2,439	102	4,339	298	941	30	7,719	430
December	610	66	1,647	234	452	38	2,709	338
Total	26,404	1,002	21,833	2,367	29,570	684	77,807	4,053

TABLE 2.--LANDINGS AND NUMBER OF TRIPS, BY MONTH, OF INDUSTRIAL TRAWL-FISH VESSELS AT NEW BEDFORD, MASS., 1958

[In thousands of pounds]

Month	Pounds	Trips
January	176	15
February	347	20
March	803	32
April	5 , 251	114
May	15,106	230
June	9,520	197
July	2,923	89
August	3,091	90
September	1,414	49
October	1,677	51
November	2,057	55
December	284	17
Total	42,649	959

Note. -- At least 90 percent of landings from No Mans area.

TABLE 3.--LANDINGS AND NUMBER OF TRIPS, BY MONTH AND FISHING AREA, OF INDUSTRIAL TRAWL-FISH VESSELS AT GLOUCESTER, MASS., 1958

[In thousands of pounds]

Month	Ipsw	rich	Stell	wag e n	Naus	set	Sout Mai	hern ne	Tot	al
	Pounds	Trips	Pounds	Trips	Pounds	Trips	Pounds	Trips	Pounds	Trips
January	86	2							86	2
February	25	3							25	3
March										
April	38	5							38	5
May	194	9	194	9	1,270	59	129	6	1,787	83
June	835	69	796	47	1,768	46	26	2	3,425	164
July	186	18	101	6	260	3			547	27
August	168	8	410	23	1,707	58	34	2	2,319	91
September	216	15	409	22	1,836	86			2,461	123
October	293	23	772	42	2,515	103			3,580	168
November	151	16	372	26	709	57			1,232	99
December	71	4	841	46			21	2	933	52
Total	2,263	172	3,895	221	10,065	412	210	12	16,433	817

TABLE 4.--SPECIES COMPOSITION, IN PERCENT BY WEIGHT, OF POINT JUDITH INDUSTRIAL TRAWL-FISH LANDINGS FROM THE OFFSHORE AREA, BY MONTHS, 1958

[+ indicates less than 0.1 percent]

Species	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Number of samples	4	0	10	15	13	Н	2	N	1 6	5	7	\sim
Red hake	9.0	2.6	0.5	28.2	8.09	28.9	27.2	43.8	25.1	35,3	26.7	2.5
White hake	0.8	0.1	1	;	;	!	!	+	0.1	2.1	0.5	1 1
Silver hake	% ∞.∞	2.4	0.7	0.7	4.0	30.9	33.7	27.2	47.8	41.6	6.9	0
Little skate	5.6	10.0	13.7	12.2	2.2	10.0	13.4	2.4	8.0	7.8	8.5	19.2
Big skate	13.9	20.3	14.0	11.2	1.2	1	1	3.3	I	1.7	6.4	8.2
Immature skate	0.7	l i	1	1.4	1	1	1	1	;	1	;	;
Spotted hake	1	;	1	1	¦	1	}	;	;	;	0.1	1
Eel pout	9.1	27.7	32.7	13.2	19.5	25.6	14.6	1.6	;	1.2	0.5	w 5.
Longhorn sculpin	2.2	2.4	9.9	1.8	1.5	†	1	0.3	1	0.1	0.8	9.0
Sea robin	1	;	}	1	0.4	ì	1	;	10.2	2.5	6.3	+
Striped sea robin	1	-	1	1	1	;	;	1	0.2	ì	1	l l
Angler	6.9	13.8	16.3	15.9	5.5	1	4.6	11.4	1.9	0.8	5.6	0.6
Four-spot flounder	0.7	+	0.5	7.0	0.5	1.2	0.8	1.2	9.0	ì	0.3	1.2
Sand flounder	7.0	5.2	2.2	1.8	0.3	l	1	;	0.4	+	1.0	+
Gulf stream flounder	1	0.3	1	1	;	1	¦	ļ	0.1	;	-	;
Yellowtail flounder	10.1	5.8	2.5	2.3	1.1	2.2	3	0.1	0.1	1	0.5	1
Blackback flounder	0.1	0.2	+	+	0.1	ŀ	1.2	2.1	0.7	9.0	0.2	1
Sea raven	1	!	1	0.2	0.3	;	1	t 1	i	1	į.	1
Spiny dogfish	24.2	3.7	7.0	7.5	1.7	ł	1	;	1	}	38.0	42.2
Smooth dogfish	1	;	!	1	0.5	1	1	5.2	1	1	ŀ	1
Barndoor skate	8.1	4.1	1.8	2.4	;	1	1	;	¦	0.5	0.3	+
Alewife	5.6	1.0	3.6	4.0	+	1.2	9.0	9.0	!	3.2	0.3	3.6
Herring	0.5	0.3	0.8	0.3	0.2	;	!	1	1	0.1	!	
Scup	;	;	;	;	i	1	;	1	1.6	1.7	1	0.3
Butterfish	ì	!	;	0.1	1	1	°,∞	9.0	3.2	0.5	0.3	;
Cunner	1	1	I		!	l I	1 	+	}	+	1	!
Rockling	;	;	;	1	!	!	+	;	!	+	}	}

1 Based on 1955, 1956, and 1957 samples.

TABLE 5.--SPECIES COMPOSITION, IN POUNDS, OF POINT JUDITH INDUSTRIAL TRAWL-FISH LANDINGS FROM THE OFFSHORE AREA, BY MONTHS, 1958

[In thousands of pounds. + indicates less than 1,000 pounds]

							`	4	,			
Species	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.1	Oct.	Nov.	Dec.
Red hake	4	20	7	1,300	2.751	627	348	959	676	1 639	ראא	2.1
White hake	5	Н	1	; ;		1 1) - 	\	⊋	, g	7 () ;
Silver hake	23	19	9	32	180	878	431	595	760	1.932	168	09
Little skate	33	78	127	562	100	284	172	53	77	362	200	117
Big skate	83	159	130	516	54	1	1	72	ì	79	156	50
Immature skate	4	1	;	65	;	i	;	1	1	ľ	;	1
Spotted hake	i	!	1	1	1	ţ	1	1	1	1	~	ł
Eel pout	54	217	302	809	882	727	187	35	;	56	12	21
Longhorn sculpin	13	19	19	83	99	1	1	7	¦	5	50	7
Sea robin	1	ł	ì	}	18	1	l l	1	86	116	154	+
Striped sea robin	}	;	!	1	1	!	1	1	~	!	1	ł
Angler	41	108	151	733	549	i	59	250	18	37	63	55
Four-spot flounder	4	+	5	18	23	34	10	26	9	1	7	7
Sand flounder	45	41	20	83	14	1	;	}	4	+	24	+
Gulf stream flounder	ì	2	!	1	1	1	1	;	~ -1	;	;	;
Yellowtail flounder	9	45	23	106	50	63	1	~	Н	;	12	;
Blackback flounder	-	~	+	+	2	;	15	46	2	28	5	i I
Sea raven	!	1	;	6	14	}	1	1	;	;	;	ł
Spiny dogfish	145	53	37	346	77	;	1	;	;	1	927	257
Smooth dogfish	ł	1	1	1	23	•	;	114	;	1	1	ł
Barndoor skate	48	32	17	111	┿.	;	1	1	1	23	7	+
Alewife	33	∞	33	18	+	34	₩	1	!	149	7	22
Herring	Μ	2	~	14	σ	!	1	!	ł	5	:	-
Scup	1	:	ŀ	1	1	ł	;	;	15	79	+	2
Butterfish	1	i	1	5	1	}	46	ជ	31	23	7	1
Cunner	ľ	;	!	1	;	1	ì	ł	ł	+	1	!
Three-bearded rockling	1	!	†	!	}	1	+	;	}	+	i	1
Total	596	782	924	4,609	4,517	2,841	1,279	2,185	696	4,631	2,434	608

1 Based on 1955, 1956, and 1957 samples.

TABLE 6.--SPECIES COMPOSITION, IN PERCENT BY WEIGHT, OF POINT JUDITH INDUSTRIAL TRAWL-FISH LANDINGS FROM THE INSHORE AREA, BY MONTHS, 1958.

[+ indicates less than 0.1 percent]

						•						
Species	Jan.	Feb.	March	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Number of samples	М	14	18	10	16	28	56	16	19	15	22	9
Red hake White hake Silver hake Little skate Big skate	2.1 3.9 10.3 17.5	0.6	0.4 0.2 11.8	10.1	34.4	36.5 11.7 12.9 6.7	17.7 ++ 33.5 9.2 3.4	10.0 36.3 9.9 2.8	13.3 11.0 10.8 7.0	25.8	32.0 1.81 4.62	20.5
Spotted nake Eel pout Longhorn sculpin Sea robin Striped sea robin Angler	1.7.1 7.1.7 7.1.8	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	7.0.1.0.2	53.2	20.8	6.0 6.0 6.0 1.0 1.0	3.0 0.1 1.8 0.4	0.2 16.0 0.3 9.7	13.0	+ 1.0.1 8+1.7	+ 0.1 4.3 14.1	3.0
Four-spot flounder Sand flounder Yellowtail flounder Blackback flounder	1.5	0.5	000	0.2	0.5	1.7	1.2	0.2	0.6	0.7	0.1	3
Blueback Sea raven Spiny dogfish Smooth dogfish Barndoor skate Brier skate Shad	15.9 15.9	0 1 1 1 1 1 1 1 1	0 0	13.8	1.0800	0 1 1 9 1 1 1	1.000 +	004	0.20	22.1	+ 111.4	1166
Alewife Menhaden Herring Scup Butterfish Sea bass Mackerel Cunner	28.8	7.00	8	4.12.11.1	9.0	0.1	0.7	0.1	0 000 +-	0.3	3.4	7.5
inree-bearded rockling	!	;	+	1	7.0	!	!	+	+	;	1	1

TABLE 7.--SPECIES COMPOSITION, IN POUNDS, OF POINT JUDITH INDUSTRIAL TRAWL-FISH LANDINGS FROM THE INSHORE AREA, BY MONTHS, 1958

T]	Tri monsan	d to enimeno	poultas. + ritateates ress tital 1,000 poullas	7)	•				
Species	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Red hake	12	2	3	43	257	707	305	223	515	868	1,393	338
White hake	22	;	;	;	1	1	+	;	+	1	35	i
Silver hake	1	5	٦	+	47	228	577	811	1,201	754	798	428
Little skate	59	59	78	19	58	250	158	221	418	242	226	181
Big skate	100	77	46	8	51	130	58	63	271	549	382	55
Spotted hake	:	;	;	;	!	}	!	!	4	+	+	;
Eel pout	45	151	386	227	155	122	52	4	+	}	4	M
Longhorn sculpin	6	15	52	40	40	16	2	+	-	8	187	3
Sea robin	1	1	!	;	9	4	31	357	503	57	1	;
Striped sea robin	;	;	;	;	!	2	7	7	15	+	1	i
Angler	51	14	15	₩	46	335	310	217	376	276	612	107
Four-spot flounder	1	1	;	;	4	33	33	27	23	13	4	;
Sand flounder	6	2	9	٦	7	4	8	4	43	24	17	5,

TABLE 8.--SPECIES COMPOSITION, IN PERCENT BY WEIGHT, OF INDUSTRIAL TRAWL-FISH LANDINGS FROM THE NO MANS AREA, BY MONTHS, 1958

[Samples taken from New Bedford and Point Judith]

								•				
Species	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Number of samples			1 6	7.		n	3	ı	ı	٦	4	N
Red hake White hake Silver hake Little skate Big skate Immature skate	11111	11111	4.9 0.4 11.8 27.9	26.8	86.0 10.3 0.5	51.6 27.3 4.8 4.0	24.3 24.8 7.2 8.3	74.7	1.4	33.8	52.2 0.6 10.4 9.0 3.9	8.4 8.8 1.8 1.0 2.0
Eel pout Longhorn sculpin Sea robin Angler			27.9 12.1 	27.1 5.7 5.7 3.0	0000	5.3	1.4		3.0	1 1 1 1	1.4 2.1.3	1.6
Four-spot flounder Sand flounder Yellowtail flounder Blackback flounder	1111	1 1 1 1	1.4	1.0	0.00	1.3	6.0		N 1 1 1 9 1 1 1 1 9 1 1 1 1 1 1 1 1 1 1	2 1 7 1	0.7	8.60
Spiny dogfish Smooth dogfish Barndoor skate Brier skate Conger eel	11111	1111	4 4 4 1 1 1 4 1 1 1	16.6		11111	1111	1 1 . 1 1	1 1 1 1 1	2.3	804 0	23.2
Alewife Herring Scup Butterfish			0.1	0.1		7.0	1.8	9	0	1.5	0.7	18.6
Cunner	;	ł	1	!	-	!	1		1	1	0.7	

1 Based on 1955, 1956, 1957 samples.

TABLE 9.--SPECIES COMPOSITION, IN POUNDS OF NEW BEDFORD INDUSTRIAL TRAWL-FISH LANDINGS FROM THE NO MANS AREA, BY MONTHS, 1958

[In thousands of pounds]

			ווח זדד ו	chineanom iii	7	pourus J						
Species	Jan.	Feb. ²	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Red hake	;	Н	39	1,407	12,991	4,912	1,236	2,309	20	567	1,074	17
White hake	1	;	;	!	1	+	1	;	1	ł	, 12	1
Silver hake	1	16	n	;	1,556	2,599	725	522	61	275	214	24
Little skate	45	66	95	441	, 76	457	210	;	109	173	185	24
Big skate	92	5	224	273	1	381	29	!	1,012	1	8	46
Immature skate	1	Ì	ŀ	11	i	i	!	;	11	1	1	9
Eel pout	18	99	224	1,423	136	38	41	;	;	!	;	;
Longhorn sculpin	16	99	46	299	8	ì	!	22	-	;	27	2
Sea robin	1	г -1	1	-	09	1	1	ŀ	42	1	84	5
Angler	!	႕	48	158	121	505	i	;	115	;	53	17
Four-spot flounder	ł	i	1	t 1	15	219	26	62	37	9	21	5
Sand flounder	∞	45	11	53	15	124		1	!	!	14	11
Yellowtail flounder	!	36	~	5	9/	1	1	!	1	20	4	-
Blackback flounder	1	}	;	-	8	114	1	;	1	!	!	1
Spiny dogfish	;	;	18	872	1	1	;	1	1	265	181	99
Smooth dogfish	!	1	1	i	1	•	!	-	1	;	9	1
Barndoor skate	i i	;	z	294	1	1	1	77	;	39	25	m
Brier skate	1	1	ì	5	!	1	!	i	t t	1	!	I I
Alewife	1	;	ч	5	!	49	53	i I	!	25	∞	53
Herring	1	m	1	5	1	1	1	1	1	;	9	;
Scup	;	;	1	ł	;	86	;	1	;	255	4	1
Butterfish	!	1	1	!	1	53	564	66	7	25	33	7
Cod	;	Н	1	Ţ	-	1	i	1	}	;	ł	;
Three-bearded rockling	!	1	ļ	i	1	1	1	ľ	1	;	77	1
Conger eel	1	1	1	1	1	-	!	1	!	!	4	}
Total	176	347	962	5,251	15,106	9,531	2,922	3,091	1,414	1,674	2,049	284

1 Based on combined sample data for 1955, 1956, and 1957.
2 Based on 1957 sample only.

TABLE 10.--SPECIES COMPOSITION, IN POUNDS, OF POINT JUDITH INDUSTRIAL FISH LANDINGS FROM THE NO MANS AREA, BY MONTHS, 1958

[In thousands of pounds. + indicates less than 1,000 pounds]

	tri monag	TO GRIEGING	• animod		ד וועד כמי מכים		COO 6T IMPIES CIENT	pounds.				
Species	Jan.	Feb.	$ $ Mar $_{ullet}^{1}$	Apr.	May	June	July	Aug.	Sept.	Oot.	Nov.1	Dec.
Red hake	{	1	4	604	8,885	3,256	905	2,106	58	25	491	22
White hake	;	;	;	1		-	1	1	1	1	9	i
Silver hake	1	1	+	!	1,064	1,723	530	476	179	12	86	38
Little skate	1	1	6	189	52	303	154	1	321	∞	85	36
Big skate	{	1	22	117	ł	252	49	1	2,986	;	37	73
Immature skate	ł	1	1	2	1	1	!	-	33	1	-	σ
Eel pout	{	}	22	611	93	25	30	1	1	1	1	4
Longhorn sculpin	1	i	10	128	21	1	1	50	1	1	77	7
Sea robin	1	1	1	1	41	1	-	1	125	1	33	1
Angler	1	;	Ŋ	89	83	334	1	1	338	ŀ	72	12
Four-spot flounder	ł	1	}	1	10	145	19	56	108	႕	6	∞
Sand flounder	1	1	Н	23	10	82	1	;	ŀ	}	7	18
Yellowtail flounder	}	1	+	~	52	1	}	}	ì	Н	CJ	2
Blackback flounder	1	i	1	-	21	92	1	1	1	1	1	1
Spiny dogfish	1	1	7	374	1	1	}	1	ł	12	83	105
Smooth dogfish	1	!	1	} ;	1	i	1	1 6	1	1 '	m	1 1
Barndoor skate	1	1	m	126	1	-	1	70	1	~	Image: section of the content of the	5
Brier skate	}	1	!	C3	1	1	1	;	!	1	!	!
Alewife	1	}	+	2	;	1	39	1	!	Н	4	84
Herring	1	1	1	7	1	-	1	1	}	!	m	1
Scup	1	1	}	1	1	57	1	1	1	11	~	1
Butterfish	;		-	<u>t</u> 1	1	13	413	06	21	П	15	11
Cunner	ł	1	1	1	-	}	!	ţ	1	1	7	1
Conger eel	1	;	;	1	1	777	1	1	1	1	C4	1
		!										
Total	1	1	78	2,253	10,332 6,316	6,316	2,139	2,818	4,169	74	940	452

1 Based on 1955, 1956 and 1957 sample data.

TABLE 11.--SPECIES COMPOSITION, IN PERCENT BY WEIGHT, OF GLOUCESTER TRAWL-FISH LANDINGS FROM THE IPSWICH AREA, BY MONTHS, 1958

[+ indicates less than 0.1 percent]

Species	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.1	Oct.1	Nov.1	Dec.
Number of samples	!	1	; ;	}	т Н	7	7	н	Т.	4	2	1
Red hake Silver hake Little skate Big skate Haddock					72.0	65.9 2.5 0.1 2.9	86.0	46.8 8.6 6.1 1.0 8.0	42.4 37.9	33.7 25.2 2.0 0.5 0.5	23 36.4 00.4 0.9	1
Eel pout Longhorn sculpin Sea robin Angler Ocean perch					14.3	6.00		2.3	1:11	9.0	1.1 + 6.9	
Dabs Yellowtail flounder Greysole Sea raven Spiny dogfish		1111		11111	0.0	22.7	0 0 1 1 1 1	2 0 7	1.5	18.4	9 0 +	
Smooth dogfish Shad Bluebacks Herring Butterfish	11111				[1.22	7.7	12.0	11.9	0.4	3.5.4 10.4 10.4 10.2	11111
Cod Three-bearded rockling	! !	! !	; ;	1 1	! !	2.3	; ;	1.4	0.7	0.6	0.3	

1 Based on 1957 samples.

TABLE 12. -- SPECIES COMPOSITION, IN POUNDS, OF GLOUCESTER INDUSTRIAL TRAWL-FISH LANDINGS FROM THE IPSWICH AREA, BY MONTHS, 1958

[In thousands of pounds. + indicates less than 1,000 pounds]

	[In thousands	of	•spunod	+ indicates less	ates le		than L,000 pounds	pounds J				
Species	Jan. 1	Feb.1	Mar.	Apr. 1	May	June	July	Aug.	Sept.2	0ct.2	Nov. ²	Dec.3
Red hake Silver hake Idttle skate Big skate Haddock	82141	1 + 1	1111	27 27 1 1 1 2 2 1 1 1	232 17	567 22 1 1 25	160	95	82 I I 31	99 74 6 1	36 1 1 1 1	22 33 11 + 1 + 1
Eel pout Longhorn sculpin Sea robin Angler Ocean perch Dabs	1 + 1 57 4 -	+ 44+	}	1 + 1 20 00 +	146	52 52 12 23 23	+	2115	1 + 1 1 1 0	24 54 54 54 54 54 54 54 54 54 54 54 54 54	211514	⊣¦ +⊘⊣∞
Yellowtail flounder Blackback flounder Greysole	! ! +	+	1 1 1	+		1 50		110		1 1 1	-	-
Sea raven Spiny dogfish Smooth dogfish Shad Bluebacks						177	1 1 1 1 4	111 1 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7		1 1 1 7	11289	+ 1 6 4 0
Menhaden Herring Butterfish		} } }		: : :		141		L ! !	26	1 4 +	† † †	1 + 1
Cod Three-bearded rockling	} }	; ;	1 1	† 1 † †	! !	20	1 1	1 60	1 0	6.2	1 +	+
Total	\$6	24		37	322	863	185	204	216	292	150	91

¹ Based on May sample data.
2 Based on 1957 samples.
3 Based on November sample.

TABLE 13.--SPECIES COMPOSITION, IN PERCENT BY WEIGHT, OF GLOUCESTER INDUSTRIAL TRAWL-FISH LANDINGS FROM THE STELLWAGEN BANK AREA, BY MONTH, 1958

Species	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	L . vov	Dec. 1
Number of samples	ł	1	1	1	1	7	т		Ч	~	2	9
Red hake Silver hake Little skate Big skate Haddock	11111			11111	1 1 1 1 1	2.2	14.2	43.4	69.5 14.2 0.3 1.0	14.2	55.3 10.9 0.5 4.0	55.9 14.7 8.4
Eel pout Longhorn sculpin Angler	1 ! !	1 1	1 1 1			23.0	0.0	2.9	00	0.1	1.1	0.6
Dab Sand flounder Yellowtail flounder Blackback flounder Greysole Ocean perch		11111	11111	11111	1 1 1 1 1 1	9 !!!	0 1 1 1	9.3	3.3	3.2	2 2 2 1	00000 24546
Sea raven Spiny dogfish Wrymouth Blueback		1111					5 1 1 3 1	17.0	1111	4.0	0 1 1 1	0.1 2.4 0.9
Alewife Herring Butterfish	1 1 1		1 1 1	1 1 1		8.7	0.2	1.2	1.7	24.4	2.7	0.4
Lumpfish Cod Three-bearded rockling Conger eel	1111	1 1 1 1	1 1 1 1			27.3	1111	£ 5 6 1 6 1 6 1 6 1 6 1 6 1 6 1 6 1 6 1 6	000	1 1 6 1	14.11	10.7
					i e							

1 Based on 1957 samples.

TABLE 14.--SPECIES COMPOSITION, IN POUNDS, OF GLOUCESTER INDUSTRIAL TRAWL-FISH LANDINGS FROM THE STELLWAGEN BANK AREA, BY MONTHS, 1958

[In thousands of pounds + indicates less than 1,000 pounds]

								,				
Species	Jan.	Feb.	March	April	May ¹	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Red hake Silver hake Little skate Big skate Haddock	11111			11111	48112	118	173	178 26 	284 58 1	110 80 110	206 41 2 15 26	470 124
Eel pout Longhorn sculpin Angler	1 1 1				45 15 25	183 60 101	П + Ф	12	w ~ 1	H ! !	461	ろろコ
Dab Sand flounder Yellowtail flounder Blackback flounder Greysole Ocean perch Sea raven Spiny dogfish Wrymouth Blueback					1121111111	112111111	4	7 1 1 4 1 1 9 1 1 1 8	814111111	255 8 113 113 244 244	8 7 1 1 1 8	U U 4 U W 4 U O i ₩
Alewife Herring Butterfish	1 1 1		1 1 1	; ; ;	171	69	1 + [1 1	18	1888	110	m 0
Lumpfish Cod Three-bearded rockling	1 1 1	1 1 1	1 1 1	; 9 1 3 ; ;	53	217	1 1 1	14	146	1 1 1	35	900
Total	ŀ	1	1	ì	195	964	100	411	406	694	372	842

1 Based on June samples.

TABLE 15.--SPECIES COMPOSITION, IN PERCENT BY WEIGHT, OF GLOUCESTER INDUSTRIAL TRAWL-FISH LANDINGS FROM THE NAUSET AREA, BY MONTH, 1958.

[+ indicates less than 0.1 percent]

		- +	Indicates	s Tess	onan o	nan o.r percent	nt.]					
Species	Jan•	Feb.	Mar.	Apr.	May	June	July	Aug.	Sépt.	Oct.	Nov.	Dec.
Number of samples	!	1	1	}	4	7	т	4	9	႕	н	1
Red hake write here	1 1	; ;	!		65.7	54.3	78.2	80.0	60°0	21.5	66.7	1 1
Silver hake]		1 1	! !	20.9	20.6	9•9	8.4	ο φ	14.5		
Little skate	;	1	ļ	1	0.1	0.2	1	0.1	0.1	!	0.4	}
Big skate	1	1	!	1	1	2. 6	1	0.4	0.8	ł	ì	1
Haddock	!	1	1	!	2.0	3.1	0•3	1.5	1.8	1	12.5	1
Spotted hake	;	1	!	!	l 1	i i	1	!	ļ	0.1	1	!
Eel pout	i	i	1	l i	0•9	6.2	4.9	3.7	3.0	1	2.5	ł
Longhorn sculpin	!	1	ı	1	0.4	1	+	0•3	0.5	7.5	0.5	t !
Sea robin	1	!	!	1	1	1	1	1	1	1.0	1	!
Angler	!	!	!	1	0.2	1	5.9	0.1	3.2	8.4	0.5	!
Weakfish	!	-	!	1	;	}	!	!	ł	0.1	1	!
Dabs	1	1	i i	1	2.0	0.3	9•0	0.7	6.0	0.4	6 • 0	;
Four-spot flounder	;	i	;	1	1	ţ	1	ί	+	1.0	ł	;
Yellowtail folunder	1	!	1	1	;	1	!	!	0.5	1	ł	;
Greysole	1	1	1	1	0.2	1	0.3	1	1	1	0.2	1
Osean pearch	;	1	1	1	0.2	1	1	!	+	!	!	}
Sea raven	1	;	ł	}	;	1	1	0.4	0.2	!	1	1
Spiny dogfish	;	!	1	1	0.2	1.1	;	0.2	5.7	!	4.8	1
Shad	!	1	1	!	ł	1	i i	1	1	1	4.2	1
Blueback	1	1	! }	1	0.2	1	1	0.6	3.6	45.4	4.7	}
Alewife	;	ŀ	ł	ł	ł	1	1	1	0.2	1	;	ł
Herring	;	¦	-	!	1.4	3.1	3.2	3.3	9.5	0.8	1.5	ļ
Butterfish	1	1	!	1	1	1	1	0.1	0.1	1.3	!	1
Squid	;	1	1	!	;	!	;	;	0.1	1	!	1
Cod	}	t I	i	I	0.2	8.6	ł	0.1	+	!	ł	1
Three-bearded rockling	}	1	i	!	0.4	!	!	0.1	0.2	1.0	9.0	!

1 Based on 1957 samples.

TABLE 16.--SPECIES COMPOSITION, IN POUNDS, OF GLOUCESTER INDUSTRIAL TRAWL-FISH LANDINGS FROM THE NAUSET AREA, BY MONTH, 1958.

[In thousands of pounds. + indicates less than 1,000 pounds]

Species	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Red hake White hake Silver hake Little skate Big skate Haddock Spotted hake	111111	111111	111111	111111	834 265 1 255	364 44 46 55	203	1,366	1,107 152 152 2 15 15	365	273	
Eel pout Longhorn sculpin Sea robin Angler Weakfish Dabs	111111				521212	110	2+1212	62 61 64	55 9 17 17 17	189 25 25 211 3	814 14 19	
Four-spot flounder Yellowtail founder Greysole Ocean perch	1 1			1 1 1 1	1 1 0 0	1 1 1 1	-		+ 0 +	1115	1 - 1	
Sea raven Spiny dogfish Shad Blueback		1 1 1 1		1 1 1 1	1010	1611	1 1 1 1	10 10	105	1,066	33	
Alewife Herring Butterfish	1 1 1	111			181	1551	∞	2 2 2	4 174 2	33	171	1 1 1
Squid Cod Three-bearded rockling		1 1 1		1 1 1	1 60	152	1 1 1	100	7 + 7	25	1 1 4	111
Total	1	1	1	!	1,272	1,770	260	1,708	1,834	2,516	710	1

TABLE 17.--TOTAL POUNDS AND PERCENT OF EACH SPECIES LANDED IN THE INDUSTRIAL TRAWL CATCH, BY PORT AND FISHING AREA, 1958.

[In thousands of pounds. + indicates less than 0.1 percent]

			Point .	Judith			New Be	edford	То	tal
Species	Offs	hore	Insl	nore	No 1	Mans	No N	Mans		Mans
	Pounds	Percent	Pounds	Percent	Pounds	Percent	Pounds	Percent	Pounds	Percent
Red hake	8,753	33.2	4,666	21.4	16,356	55.3	24,570	57.6	40,926	56.7
White hake	117	0.4	57	0.3	6	+	12	+	18	+
Silver hake	4,784	18.1	4,850	22.2	4,120	13.9	5,995	14.0	10,115	14.0
Little skate	2,165	8.2	1,939	8.9	1,160	3.9	1,911	4.5	3,071	4.2
Big skate	1,299	4.9	1,473	6.8	3,536	12.0	2,190	5.1	5,726	7.3
Immature skate	69	0.3			47	0.2	28	0.1	75	0.1
Spotted hake	2	+	4	+						
Eel pout	3,101	11.8	1,149	5.3	785	2.6	1,946	4.6	2,731	3.8
Longhorn sculpin	280	1.1	445	2.0	198	0.7	559	1.3	757	1.0
Sea robin	386	1.5	958	4.4	205	0.7	192	0.4	397	0.5
Striped sea robin	2	+	31	0.1						
Angler	1,764	6.7	2,370	10.9	879	3.0	1,018	2.4	1,897	2.6
Haddock										
Ocean perch										
Four-spot flounder	140	0.5	137	0.6	356	1.2	415	1.0	771	1.1
Sand flounder	228	0.9	185	0.8	141	0.5	278	0.6	419	0.6
Gulf stream flounder	3	+								
Yellowtail flounder	362	1.4	1	+	59	0.2	144	0.3	203	0.3
Blackback flounder	109	0.4	176	0.8	97	0.3	144	0.3	244	0.3
Dabs						~ ~				
Greysole										
Sea raven	23	0.1	19	0.1						
Spiny dogfish	1,818	6.9	1,700	7.8	576	1.9	1,402	3.3	1,978	2.7
Smooth dogfish	137	0.5	651 29	3.0	3	+	6 472	+ 1.1	9 689	+ 1.0
Barndoor skate	238	0.9	29 	0.1	217 2	0.7	472 5		7	
Brier skate Shad			4	+		+		+		+
	0.00			0 1	7.00	2.1	0.7.0	0.5	2/0	0.5
Alewife Menhaden	325	1.2	517 2	2.4	130	0.4	212	0.5	342	0.5
Herring	40	0.2	103	0.5	5	+	14	+	19	+
Scup	96	0.4	117	0.5	70	0.2	345	0.8	415	0.6
Butterfish	128	0.5	198	0.9	570	1.9	764	1.8	1,334	1.8
Sea bass			2	+						
Blueback										
Cod							1	+	1	+
Cunner			20	0.1	7	+			7	+
Three-bearded rockling			1	+			14	+	14	+
Conger eel					46	0.2	4	+	50	0.1
Weakfish										
Squid										
Wrymouth										
Lumpfish										
Total	26,369		21,804		29,571		42,644		72,215	

TABLE 17.--TOTAL POUNDS AND PERCENT OF EACH SPECIES LANDED IN THE INDUSTRIAL TRAWL CATCH, BY PORT AND FISHING AREA, 1958--Continued

[In thousands of pounds. + indicates less than 0.1 percent]

			Gloue	ester				
Species	Ips	wich	Nau	set	Stell	wagen	Grand	total
	Pounds	Percent	Pounds	Percent	Pounds	Percent	Pounds	Percent
Red hake	1,409	57.1	5,484	54.4	1,284	33.0	62,522	45.7
White hake			15	0.1			207	0.1
Silver hake	316	12.8	1,306	13.0	414	10.6	21,785	15.9
Little skate	8	0.3	12	0.1	3	0.1	7,198	5.3
Big skate	12	0.5	68	0.7	21	0.5	8,599	6.3
Immature skate							144	0.1
Spotted hake			3	+			9	+
Eel pout	56	2.3	335	3.3	254	6.5	7,626	5.6
Longhorn sculpin	54	2.2	212	2.1	90	2.3	1,838	1.3
Sea robin	+	+	25	0.2			1,766	1.3
Striped sea robin							33	+
Angler	149	6.0	294	2.9	164	4.2	6,638	4.9
Haddock	42	1.7	229	2.3	219	5.6	490	0.4
Ocean perch	28	1.1	3	+	25	0.6	56	+
Four-spot flounder			25	0.2			1,073	0.8
Sand flounder					1	+	833	0.6
Gulf stream flounder							3	+
Yellowtail flounder	20	0.8	9	0.1	81	2.1	676	ρ.5
Blackback flounder	1	+			1	+	531	0.4
Dabs	111 5	4.5 0.2	77 5	0.8	106 12	2.7 0.3	294 22	0.2
Greysole		0.2	,	•	12	0.5	22	т
Sea raven	+	+	11	0.1	1	+	54	+
Spiny dogfish	28	1.1	164	1.6	126	3.2	5,814	4.2
Smooth dogfish	8	0.3					805	0.6
Barndoor skate							956	0.7
Brier skate		0.8	- -	0.3			7 55	+
Shad	21,	0.0	0.0	0.5			22	+
Alewife			4	+	13	0.3	1,201	0.9
Menhaden	7	0.3	2/0	3.4	216	 ¢ 1	9	+
Herring	71	2.9	342	4. د 	316	8.1	891	0.7
Scup Butterfish	1	+	37	0.4	49	1.3	628 1,747	0.5 1.3
Sea bass		+	ر 		47	1.0	2,747	
Blueback	88	3.6	1,178	11.7	262	6.7	1,528	+ 1.1
Cod	22	0.9	157	1.6	396	10.2	576	0.4
Cunner			127	1:0	J90	10.2	27	+
Three-bearded rockling	13	0.5	40	0.4	23	0.6	91	0.1
Conger					3	0.1	53	+
Weakfish			3	+			3	+
Squid			2	+			2	+
Wrymouth					13	0.3	13	+
Lumpfish					14	0.4	14	+
Total	2,470		10,070		3,891		136,819	

TABLE 18.--CATCH PER TRIP OF INDUSTRIAL TRAWL FISH ON EACH OF THE PRINCIPAL FISHING AREAS, BY MONTHS, 1958

[In thousands of pounds. Number of interviewed trips in parentheses]

Month	Point	Judith	No Mans	Ipswich ¹	C+ 0 1 1	Nouset
JVIDIT GIT	Offshore	Inshore	No Mans	TDSWIGH-	Stellwagen	Nauset
January February March April May June July August September October November December	32 (8) 40 (58)	6 (92) 3 (107) 4 (151) 4 (94) 4 (181) 7 (258) 9 (163) 12 (135) 14 (188) 13 (192) 15 (174) 7 (101)	10 (7) 47 (34) 60 (128) 60 (66) 35 (21) 32 (21) 32 (31) 25 (2) 31 (3) 12 (2)	43 (2) 8 (3) 8 (5) 22 (15) 12 (52) 10 (17) 20 (8) 14 (15) 13 (14) 9 (16) 15 (6)	22 (9) 17 (33) 17 (6) 18 (21) 19 (19) 18 (41) 14 (25) 18 (45)	22 (59) 38 (43) 87 (3) 29 (54) 21 (86) 24 (94) 12 (53)

¹ Includes southern Maine areas.



